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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/639,154	08/16/2000	Haiyan He	US 000010	3950

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EXAMINER

MARIAM, DANIEL G

ART UNIT	PAPER NUMBER
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2621

DATE MAILED: 10/21/2003

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Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/639,154

Applicant(s)

HE ET AL.

Examiner

DANIEL G MARIAM

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 12/26/00.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-40 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-40 is/are rejected.
- 7) ☒ Claim(s) 1,8 and 14 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☒ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 6.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

Claim Suggestions

1. Claim 1 recites “means for first detecting, means for . . second detecting, means for . . third detecting” the claim will be in better form if rewritten as “first means for detecting, second means for detecting, third means for detecting” to be consistent with the body of the claim. A similar modification should also be applied to claim 20. Additionally, it may be better to insert in claim 20, line 2, after the limitation “device” the limitation “comprising the steps of”.

Claim Objections

2. Claim 8 is objected to because of the following informalities: claim 8, line 1 recites the limitation “medium”, and it should be changed to “computer medium”. The limitation “is meets” recited in line 7 of claim 1 appears to be grammatically awkward. Appropriate correction is required.

3. Claim 14 is objected to because of the following informalities: claim 14 does not end with a period. Each claim begins with a capital letter and ends with a period (See MPEP 608.01(m)).

Claim Rejections - 35 USC § 112

4. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

5. Claims 9, 10, 28, and 29 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the

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relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. The claims recite the limitation "special purpose hardware unit". Applicants' disclosure does not provide adequate description of the hardware unit. Only a cursory is mention of this unit is made on page 7, lines 12-13. It is not understood exactly the advantage of using this unit within the scope of the invention nor whether applicant is making use of a known off-the-shelf unit.

Claims 14, 33, and 40 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. While claims 14 and 33 recite [-1, 0, 0, 0, 2, 0, 0, -1], the specification says [-1, 0, 0, 0, 2, 0, 0, 0, -1] (See page 9, line 19). Likewise, while claims 34 and 40 recite the limitation [1, 1, . . . , 1], the specification says [1, 1, 1, . . . , 1] (See page 11, line 17), and thus lacks support in the specification.

6. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

7. Claims 1, 17, 20, 36, and 39 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Claim 1 recites the limitation "supplying an edge identification", and a similar limitation occurs in claims 20 and 39. It is unclear to what unit/device/means identification is being supplied to? Claim 17 recites the limitation "a means for effecting a combined low pass filter and derivative operation" a similar limitation also occurs

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in claim 36. Effecting a combined low pass filter and derivative operation what? Claim 39 recites the limitation "an output arranged to supply an edge detection indication. ." Please clarify.

Since claims 2-16, 18-19, 21-35, 37-38, and 40 directly or indirectly depend on claims 1, 17, 20, 36, and 39, they are also rejected under 35 U.S.C. 112, second paragraph, for the same reason set forth above for claims 1, 17, 20, 36, and 39.

8. Claims 13 and 32 recite the limitation "the video signal" in line 3. There is insufficient antecedent basis for this limitation in the claim.

Claim Rejections - 35 USC § 102

9. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

10. Claim 17-19 and 36-38 are rejected under 35 U.S.C. 102(b) as being anticipated by Noren, et al. (5,697,957).

With regard to claim 17, Noren, et al. an input for receiving an image related signal, i.e., cardiac signal, a means (which corresponds to summing stage) for effecting a combined low pass filter and derivative operation, without separating the two operations, and an output for providing a result of the combined low pass filter and derivative operation (See for example, col. 11, lines 30-40, and Fig. 36).

With regard to claims 18 and 19, wherein the derivative is a second derivative and a first derivative (See col. 11, lines 35-49).

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Claims 36, 37, and 38 are rejected the same as claims 17, 18, and 19 respectively except claims 36, 37, and 38 are apparatus claims. Thus, arguments analogous to those presented above for claims 17, 18, and 19 are respectively applicable to claims 36, 37, and 38.

11. Claim 39 is rejected under 35 U.S.C. 102(b) as being anticipated by Snashall, et al. (4,979,022).

With regard to claim 39, Snashall, et al. discloses an input adapted to receive an image signal, i.e., a digital color video signal, processing apparatus adapted to detect at least one edge in the image signal; and to distinguish edges having higher frequency content from edges having lower frequency content (which corresponds to edge detector 26 that operates so as to cause switch 24 to accept the output from demultiplexer 18 only in the event that it detects a high frequency keying signal), and an output arranged to supply an edge detection indication only in response to edges having higher frequency content, i.e., the edge detector accepts the output from the demultiplexer 18 only in the event it detects a high frequency keying signal (See col. 3, lines 17-30).

Conclusion

12. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. US Patent Numbers: 4463375, 5724097, and 6130966; and publications to: Herpel, et al. discloses "A VLSI implementation of a state variable filter algorithm"; and Simoncelli discloses "Design of multi-dimensional derivative filters".

Any inquiry concerning this communication or earlier communications from the examiner should be directed to DANIEL G MARIAM whose telephone number is 703-305-4010. The examiner can normally be reached on M-F (7:00-4:30) FIRST FRIDAY OFF.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, LEO BOUDREAU can be reached on 703-305-4607. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-306-0377.


DANIEL MARIAM
PRIMARY EXAMINER
ART UNIT 2621

October 7, 2003